

REMARKS

Upon entry of the present amendment, claims 1-7 will remain pending in the above-identified application and stand ready for further action on the merits.

The amendments made herein to the claims do not incorporate new matter into the application as originally filed. For example, the amendment to claim 1 simply improves the English grammatical format of the claim, so that the same is in a more proper form for issuance in a US Patent. The scope of claim 1 has not been changed by this amendment. Similarly, the amendments to claims 4-5 simply add commas to the claims and do not change the scope thereof.

Regarding newly added claims 6-7, these simply represent related embodiments to the invention already recited in claim 5.

Accordingly, entry of the present amendment is respectfully requested.

Claim Rejections Under 35 USC § 103(a)

Claims 1-5 have been rejected under 35 USC § 103(a) as being unpatentable over Hanazawa et al. '327 (US 4,812,327) in view of Wolff et al. '895 (US 5,082,895). Reconsideration and withdrawal of this rejection is respectfully requested based upon the following considerations.

The Present Invention and Its Advantages

The present inventors have found that a mixture of emulsion polymers having specific particle size ranges and different Tg are able to absorb each other and develop good film forming properties. As a result, the inventive polymer emulsions are useful for making and/or preparing moisture-proof coated papers and/or recyclable-coated papers as shown in the specification at pages 6-18 thereof via Examples and Comparative Examples.

Distinctions Over the Cited Art

The polymer emulsion of the present invention is characterized by comprising a mixture of polymer emulsions containing particles having different sizes¹ and different glass transition temperatures (see claim 1). Neither US '327 nor US '895 discloses a polymer emulsion having such a character.

US '327 may concretely discloses a latex emulsion, but it does not disclose an emulsion containing particles having different sizes and different glass transition temperatures as instantly claimed.

Likewise, it is noted that the epoxy resin of US '327 has a different particle size from the polymer emulsions of the instant

¹ Of course, the particles in an emulsion have a distribution around the average diameter and all of the particles do not have strictly the same size. But, the emulsion of the present invention is characterized by a specific particle size ($\geq 0.15 \mu\text{m}$, $\leq 0.10 \mu\text{m}$), and the particles of each distribution have different glass transition temperatures respectively.

invention. As shown in Examples 9-12 of Table 1 of US '327, it is used for filler and thus these size are generally larger, for example 10 μm or more; on the other hand, it is submitted to be well known that the particles in an emulsion are generally of a size of from 0.05 to 5 μm .

As such, the US '327 description cited by the USPTO in the outstanding office action does not disclose or suggest the preparation of a polymer emulsion, which is a mixture as recited in instant claims 1-7, containing particles having different particle sizes and different glass transition temperatures.

Furthermore, the secondary US '895 reference shows only that the smaller the particle size of the latex, the better the film performance in areas such as salt spray resistance and corrosion inhibition (see, col. 1, lines 46-49). Such a disclosure does not suggest the instant invention or provide any motivation to arrive at the same.

Accordingly, based upon the above considerations, it is clear that neither of the cited references is capable of rendering obvious the claimed invention. This is true whether such references are considered singularly or in combination.

Further, neither reference provides any motivation to those skilled in the art to arrive at the present invention as claimed. Absent such motivation in the cited art, it is clear that the outstanding rejection of the claims is not sustainable.

Conclusion

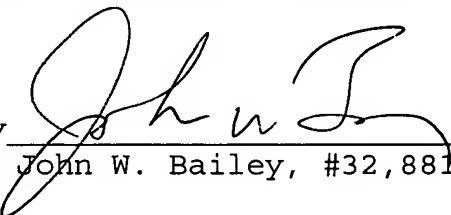
Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a Notice of Allowance clearly indicating that each of the pending claims 1-7 is allowed and patentable at present.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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